REMARKS

Summary of Claim Status

Claims 1-19 and 21 are pending in the present application after entry of the present amendment. Claims 1-8 and 14-19 are rejected for the reasons discussed below. Claim 20 is canceled, thereby rendering its rejection moot. Claims 9-13 are allowed. Applicants thank the Examiner for this acknowledgement of patentable subject matter. Claim 21 is added.

Applicants respectfully request entry of the present amendments, which are believed to place the application in condition for allowance, and further respectfully request favorable reconsideration of the claims and withdrawal of the pending rejections and objections in view of the present amendment and in light of the following discussion.

Rejections Under 35 U.S.C. § 103

Claims 1-5, 14, 16, and 17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Trimberger, U.S. Patent No. 5,892,961 ("Trimberger"), in view of Erickson, U.S. Patent No. 5,970,142 ("Erickson"). Applicants respectfully disagree, and submit that Trimberger and Erickson, alone or in any combination, do not teach or even suggest the claimed inventions. However, the rejection is believed to be moot in light of the present amendment.

Applicants have amended Claim 1 to recite a plurality of data words specifying a design, wherein a subset of a plurality of unencrypted words for controlling loading of configuration data indicates whether the plurality of data words specifying the design is a plurality of encrypted words specifying an encrypted design. The amendment is fully supported by the specification as filed, for example at page 14, lines 20-26, of the specification.

Applicants respectfully submit that Trimberger and Erickson, alone or in any combination, do not teach or even suggest the invention of amended Claim 1. In particular, neither Trimberger nor Erickson teaches unencrypted control words that indicate whether a plurality of data words specifying the design is a plurality of

encrypted words for specifying an encrypted design. In fact, Erickson teaches away from such an invention since "the PLD 110 generates the pseudo-random key 180 each time it is programmed, and the key 180 is used to encrypt the configuration data 130." Erickson at col. 3, lines 42-45. That is, in Erickson a key is generated each time a PLD is programmed, and there is no option to leave the data unencrypted, and thus there would be no need for control words to indicate whether data words specifying the design are encrypted words.

In contrast, Claim 1 recites that "a subset of the plurality of unencrypted words for controlling loading of configuration data indicates whether the plurality of data words specifying the design is a plurality of encrypted words specifying an encrypted design." As noted in the specification, there are occasions for which it is preferable not to encrypt the bitstream, such as during testing and debugging, or when multiple designers are writing code.

Therefore, Applicants respectfully request entry of the amendment and allowance of Claim 1.

Claims 2-5, 14, 16, and 17 depend from Claim 1, and thus include all of the limitations of Claim 1. Applicants believe Claim 1 is allowable for the reasons set forth above. Therefore, for at least the same reasons, Applicants believe Claims 2-5, 14, 16, and 17 are also allowable, and allowance of such claims is respectfully requested.

Claims 6-8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Trimberger, in view of Erickson, and further in view of Kwiat, U.S. Patent No. 5,931,959 ("Kwiat"). Applicants respectfully disagree, and submit that Trimberger, Erickson, and Kwiat, alone or in any combination, do not teach or even suggest the claimed inventions. However, the rejection is believed to be moot in light of the present amendments. In particular, Claims 6-8 depend from Claim 1, and thus include all of the limitations of Claim 1. Applicants believe Claim 1 is allowable for the reasons set forth above. Therefore, for at least the same reasons, Applicants believe Claims 6-8 are also allowable, and respectfully request allowance of Claims 6-8.

Claim 15 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Trimberger, in view of Erickson, and further in view of Yin, U.S. Patent No. 6,028,939 ("Yin"). Applicants respectfully disagree, and submit that Trimberger, Erickson, and Yin, alone or in any combination, do not teach or even suggest the claimed invention. However, the rejection is believed to be moot in light of the present amendments. In particular, Claim 15 depends from Claim 1, and thus includes all of the limitations of Claim 1. Applicants believe Claim 1 is allowable for the reasons set forth above. Therefore, for at least the same reasons, Applicants believe Claim 15 is also allowable, and respectfully request allowance of Claim 15.

Claims 18 and 19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Trimberger, in view of Erickson, and further in view of Yin. Applicants respectfully disagree, and submit that Trimberger, Erickson, and Yin, alone or in any combination, do not teach or even suggest the claimed inventions. However, Applicants submit that the rejections are moot in light of the present amendments.

As discussed in Applicants' previous responses, Yin merely discloses a 64-bit initial vector (IV) used in a cipher block chaining mode. Yin at col. 5, lines 39-40. There is no teaching or even suggestion in Yin as to how the initial vector IV is generated. Moreover, the system described in Yin merely uses a programmable hardware element as a processing element in a security system. There is no teaching or suggestion in Yin of a bitstream with encrypted design data. Applicants therefore resubmit and incorporate arguments and remarks previously made, which are not reproduced in this response for brevity.

Furthermore, Applicants have amended Claim 18 to recite steps of providing a cipher block starting number, and forming a cipher block chaining initial value by replacing a portion of the cipher block starting number with a starting address for loading a design into a PLD. Since Yin does not disclose or even suggest how its initial vector IV is generated, Yin cannot possibly teach or suggest these features. In particular, there is no teaching in Yin of replacing any portion of a starting number with an address.

Therefore, for at least the foregoing reasons, Applicants believe Claim 18 is allowable, and allowance of Claim 18 is respectfully requested.

Claim 19 depends from Claim 18, and thus includes all of the limitations of Claim 18. Applicants believe Claim 18 is allowable for the reasons set forth above. Therefore, for at least the same reasons, Applicants believe Claim 19 is also allowable, and allowance of Claim 19 is respectfully requested.

New Claim 21 also depends from Claim 18, and thus is believed to be allowable for at least the same reasons Claim 18 is believed to be allowable.
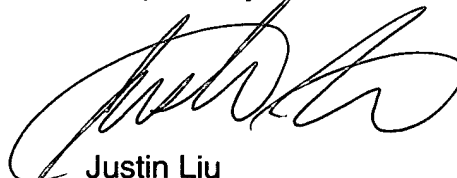
The amendments in Claims 18 and 21 are fully supported by the specification as filed, for example in Figs. 7a and 7b, and the corresponding description in the text, such as page 18, lines 14-23.

Conclusion

Applicants acknowledge an unusually thorough and helpful analysis of all pending claims by the Examiner.

No new matter has been introduced by any of the above amendments. In light of the above amendments and remarks, Applicants believe that Claims 1-19 and 21 are in condition for allowance, and allowance of the application is therefore requested. If action other than allowance is contemplated by the Examiner, the Examiner is respectfully requested to telephone Applicants' attorney, Justin Liu, at 408-879-4641.
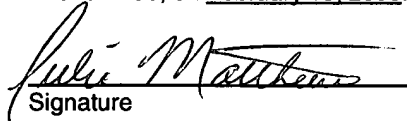
Respectfully submitted,

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I hereby certify that this correspondence is being deposited with the United States Postal Service as first-class mail in an envelope addressed to: Commissioner for Patents, P.O. BOX 1450, Alexandria, VA 22313-1450, on February 15, 2006.

Julie Matthews
Name

Signature